

What is claimed is:

1. A transmitting apparatus for transmitting a content, comprising:

5 a record medium on which at least one content has been written;

section generating means for generating section 1 to section n (where n is an integer) in such a manner that when the content is divided into the section 1 to the section n in a predetermined ratio, the length of a section on the beginning side is smaller than the length of a section on the end side;

10 signal formatting means for formatting a signal in such a manner that the length of data of each of the section 1 to the section n is the same in each of channel 1 to channel n;

15 multiplexing means for multiplexing the formatted signal; and

transmitting means for transmitting the multiplexed signal.

20 2. The transmitting apparatus as set forth in claim 1,

wherein the data of each of the section 1 to the section n has been written to said record medium corresponding to pre-designated addresses.

25 3. The transmitting apparatus as set forth in claim 1,

wherein said section generating means divides

the content by n so that the lengths of the section 1 to the section n become $1, 2, 4, \dots, 2^{(n-1)}$, respectively.

4. The transmitting apparatus as set forth in
5 claim 1,

wherein said section generating means divides the content so that the lengths of the section 1 to the section m (where $1 < m < n$; m is an integer) become $1, 2, 4, \dots, 2^{(m-1)}$, respectively, and that the length of each of the section m to the section n is the same as the length of the section m.

10 5. The transmitting apparatus as set forth in
claim 1,

15 wherein said signal formatting means repeats data of the section 1 to the section n-1 so that the length of each of signals of the channel 1 to the channel n-1 is the same as the length of a signal of the channel n.

20 6. The transmitting apparatus as set forth in
claim 1,

25 wherein said signal formatting means repeats data of each of the section 1 to the section m-1 so that the length of each of signals of the channel 1 to the channel m-1 (where $1 < m < n$; m is an integer) is the same as the length of a signal of the channel m and that the length of each of the signals of the channel m to the channel n is the same as the length of the

signal of the channel m.

7. The transmitting apparatus as set forth in
claim 1,

5 wherein said multiplexing means multiplexes
synchronous data, flag data, and the data of the
section 1 to the section n, the synchronous data being
used to establish a synchronization, the flag data
representing that beginning data is contained in each
of the section 1 to the section n.

10 8. The transmitting apparatus as set forth in
claim 1,

wherein the multiplexed signal is modulated.

9. A transmitting method for transmitting a
content, comprising the steps of:

15 writing at least one content to a record
medium;

20 generating section 1 to section n (where n is
an integer) in such a manner that when the content is
divided into the section 1 to the section n in a
predetermined ratio, the length of a section on the
beginning side is smaller than the length of a section
on the end side;

25 formatting a signal in such a manner that the
length of data of each of the section 1 to the section
n is the same in each of channel 1 to channel n;

multiplexing the formatted signal; and
transmitting the multiplexed signal.

10. The transmitting method as set forth in claim
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wherein the data of each of the section 1 to
the section n has been written to the record medium
5 corresponding to pre-designated addresses.

11. The transmitting method as set forth in claim
9,

wherein the content is divided by n so that
the lengths of the section 1 to the section n become 1,
10 $2, 4, \dots, 2^{(n-1)}$, respectively.

12. The transmitting method as set forth in claim
9,

wherein the content is divided so that the
lengths of the section 1 to the section m (where $1 < m$
15 $< n$; m is an integer) become $1, 2, 4, \dots, 2^{(m-1)}$,
respectively, and that the length of each of the
section m to the section n is the same as the length of
the section m.

13. The transmitting method as set forth in claim
20 9,

wherein data of the section 1 to the section
n-1 is repeated so that the length of each of signals
of the channel 1 to the channel n-1 is the same as the
length of a signal of the channel n.

25 14. The transmitting method as set forth in claim
9,

wherein data of each of the section 1 to the

section $m-1$ is repeated so that the length of each of signals of the channel 1 to the channel $m-1$ (where $1 < m < n$; m is an integer) is the same as the length of a signal of the channel m and that the length of each of the signals of the channel m to the channel n is the same as the length of the signal of the channel m .

5 15. The transmitting method as set forth in claim 9,

10 wherein synchronous data, flag data, and the data of the section 1 to the section n are multiplexed, the synchronous data being used to establish a synchronization, the flag data representing that beginning data is contained in each of the section 1 to the section n .

15 16. The transmitting method as set forth in claim 9,

wherein the multiplexed signal is modulated.

17. A receiving apparatus for receiving a signal from a transmitting apparatus and reproducing the received signal, the transmitting apparatus having a first record medium on which at least one content has been written, section generating means for generating section 1 to section n (where n is an integer) in such a manner that when the content is divided into the section 1 to the section n in a predetermined ratio, the length of a section on the beginning side is smaller than the length of a section on the end side.

signal formatting means for formatting a signal in such a manner that the length of data of each of the section 1 to the section n is the same in each of channel 1 to channel n, multiplexing means for multiplexing the 5 formatted signal, and transmitting means for transmitting the multiplexed signal, the receiving apparatus comprising:

separating means for separating the received signal;

10 detecting means for detecting beginning data of each of the section 1 to the section n from the separated signals;

15 a second record medium on which the beginning data of each of the section 1 to the section n is written to channel 1 to channel n, respectively;

20 reading means for successively reading data of the section 2 to the section n from said second record medium after the beginning data of the section 1 is detected, the data of the section 1 is written to said second record medium starting from the beginning data of the section 1, the data of the section 1 is read from said second record medium, and the data of the section 1 is read from said second record medium; and

25 reproducing means for reproducing the data of the section 1 to the section n that has been read from said second record medium.

18. The receiving apparatus as set forth in claim
17,

5 wherein said detecting means detects bit 1 to bit n corresponding to the section 1 to the section n of flag data contained in the signal so as to detect whether or not beginning data of the section 1 to the section n are present.

19. The receiving apparatus as set forth in claim
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10 wherein when the content is divided so that the lengths of the section 1 to the section m (where $1 < m < n$; m is an integer) become $1, 2, 4, \dots, 2^{(m-1)}$, respectively, and that the length of each of the section m to the section n is the same as the length of the section m, said second record medium has a capacity for which the total of the lengths of the section 1 to the section m and the length of the section 1 can be written.

15 20 25 20. A receiving method for receiving a signal from a transmitting apparatus and reproducing the received signal, the transmitting apparatus having a first record medium on which at least one content has been written, section generating means for generating section 1 to section n (where n is an integer) in such a manner that when the content is divided into the section 1 to the section n in a predetermined ratio, the length of a section on the beginning side is

smaller than the length of a section on the end side, signal formatting means for formatting a signal in such a manner that the length of data of each of the section 1 to the section n is the same in each of channel 1 to channel n, multiplexing means for multiplexing the formatted signal, and transmitting means for transmitting the multiplexed signal, the receiving method comprising the steps of:

separating the received signal;

detecting beginning data of each of the section 1 to the section n from the separated signals;

writing the beginning data of each of the section 1 to the section n to channel 1 to channel n, respectively, to a second record medium;

successively reading data of the section 2 to the section n from the second record medium after the beginning data of the section 1 is detected, the data of the section 1 is written to the second record medium starting from the beginning data of the section 1, the data of the section 1 is read from the second record medium, and the data of the section 1 is read from the second record medium; and

reproducing the data of the section 1 to the section n that has been read from the second record medium.

21. The receiving method as set forth in claim 20,

wherein bit 1 to bit n corresponding to the section 1 to the section n of flag data contained in the signal are detected so as to detect whether or not beginning data of the section 1 to the section n are present.

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22. The receiving method as set forth in claim 20,

wherein when the content is divided so that the lengths of the section 1 to the section m (where $1 < m < n$; m is an integer) become $1, 2, 4, \dots, 2^{(m-1)}$, respectively, and that the length of each of the section m to the section n is the same as the length of the section m, the second record medium has a capacity for which the total of the lengths of the section 1 to the section m and the length of the section 1 can be written.

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23. A transmitting and receiving system having a transmitting apparatus for transmitting a content and at least one receiving apparatus for receiving the transmitted content and reproducing the received content,

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wherein the transmitting apparatus comprises:
a first record medium on which at least one content has been written;

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section generating means for generating section 1 to section n (where n is an integer) in such a manner that when the content is divided into the

section 1 to the section n in a predetermined ratio,
the length of a section on the beginning side is
smaller than the length of a section on the end side;

5 signal formatting means for formatting a
signal in such a manner that the length of data of each
of the section 1 to the section n is the same in each
of channel 1 to channel n;

multiplexing means for multiplexing the
formatted signal; and

10 transmitting means for transmitting the
multiplexed signal,

wherein the receiving apparatus comprises:

separating means for separating the received
signal;

15 detecting means for detecting beginning data
of each of the section 1 to the section n from the
separated signals;

a second record medium on which the beginning
data of each of the section 1 to the section n is
written to channel 1 to channel n, respectively;

20 reading means for successively reading data
of the section 2 to the section n from said second
record medium after the beginning data of the section 1
is detected, the data of the section 1 is written to
25 said second record medium starting from the beginning
data of the section 1, the data of the section 1 is
read from said second record medium, and the data of

the section 1 is read from said second record medium;
and

reproducing means for reproducing the data of
the section 1 to the section n that has been read from
5 said second record medium,

wherein the transmitting apparatus transmits
the content that has been divided by n to the receiving
apparatus through a transmission line, and

10 wherein when the receiving apparatus detects
beginning data of the received content, the receiving
apparatus reproduces the content.

24. The transmitting and receiving system as set
forth in claim 23,

15 wherein the data of each of the section 1 to
the section n has been written to said first record
medium corresponding to pre-designated addresses.

25. The transmitting and receiving system as set
forth in claim 23,

20 wherein said section generating means divides
the content by n so that the lengths of the section 1
to the section n become $1, 2, 4, \dots, 2^{(n-1)}$,
respectively.

26. The transmitting and receiving system as set
forth in claim 23,

25 wherein said section generating means divides
the content so that the lengths of the section 1 to the
section m (where $1 < m < n$; m is an integer) become 1,

2, 4, ..., $2^{(m-1)}$, respectively, and that the length of each of the section m to the section n is the same as the length of the section m.

27. The transmitting and receiving system as set forth in claim 23,

wherein said signal formatting means repeats data of the section 1 to the section n-1 so that the length of each of signals of the channel 1 to the channel n-1 is the same as the length of a signal of the channel n.

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28. The transmitting and receiving system as set forth in claim 23,

wherein said signal formatting means repeats data of each of the section 1 to the section m-1 so that the length of each of signals of the channel 1 to the channel m-1 (where $1 < m < n$; m is an integer) is the same as the length of a signal of the channel m and that the length of each of the signals of the channel m to the channel n is the same as the length of the signal of the channel m.

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29. The transmitting and receiving system as set forth in claim 23,

wherein said multiplexing means multiplexes synchronous data, flag data, and the data of the section 1 to the section n, the synchronous data being used to establish a synchronization, the flag data representing that beginning data is contained in each

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of the section 1 to the section n.

30. The transmitting and receiving system as set forth in claim 23,

wherein the multiplexed signal is modulated.

5 31. The transmitting and receiving system as set forth in claim 23,

wherein said detecting means detects bit 1 to bit n corresponding to the section 1 to the section n of flag data contained in the signal so as to detect 10 whether or not beginning data of the section 1 to the section n are present.

32. The transmitting and receiving system as set forth in claim 23,

wherein when the content is divided so that 15 the lengths of the section 1 to the section m (where $1 < m < n$; m is an integer) become $1, 2, 4, \dots, 2^{(m-1)}$, respectively, and that the length of each of the section m to the section n is the same as the length of the section m, said second record medium has a capacity 20 for which the total of the lengths of the section 1 to the section m and the length of the section 1 can be written.